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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/511,418

10/14/2004

Andreas Derr

WEM-07701

9609

26339 7590 06/25/2008
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EXAMINER

DINH, BACH T

ART UNIT

PAPER NUMBER

1795

MAIL DATE

DELIVERY MODE

06/25/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/511,418	DERR, ANDREAS	
	Examiner	Art Unit	
	BACH T. DINH	1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 October 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>03/21/2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Summary

1. This is the initial Office Action based on the 10/511,418 application filed on 10/14/2004.
2. Claims 1-25 are currently pending and have been fully considered.

Priority

3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 25 recites the limitation "the base plate" in line 5. There is insufficient antecedent basis for this limitation in the claim.
6. Claim 13 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Present claim recites "...the bent ends of these contact rods are threaded into eyes provided specifically for **this purpose** on the bottom side of the base plate" it is unclear as to which aspect of the invention is the claimed limitation "this purpose".

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-4, 6-7 and 10-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Iwamoto et al. (US 5,939,610).

Addressing claim 1, Iwamoto discloses a measuring device (pH meter 1, figure 1), comprising:

An elongated first electrode having a longitudinal axis (measuring electrode 11 having a longitudinal axis, figure 1) for insertion into a material to be measured (3:44-50, 4:15-17); and

A housing (housing member 2) which at least partially surrounds the first electrode (figure 1), wherein the first electrode is movable in the axial direction of the longitudinal axis (figures 2A-2B).

Addressing claim 2, Iwamoto discloses a receptacle device (spring 20, figures 2A-2B) is provided for accommodating one end of the first electrode.

Addressing claim 3, Iwamoto discloses the receptacle device is made of an elastic material which yields in the axial direction with a movement of the first electrode (4:49-58, figures 2A-2B).

Addressing claims 4 and 6, in figures 2A-2B, Iwamoto discloses the receptacle device has a damping element (spring element) or is connected to a damping element (spring element) which yields in the axial direction (spring element 20 contracts and extends in the axial direction) with a movement of the first electrode and thereby exerts a force directed in the opposite direction on the end of the first electrode (spring element 20 exerts an outward force to go from the contracted state in figure 2A to the extended state in figure 2B).

Addressing claim 7, the housing 2 has a base plate on the side of the receptacle device (lower end of the control member 5, figure 1) and the receptacle device is part of the base plate (the spring 20 is seated within a locking member at the lower end of the control member 5, 4:53-58).

Addressing claim 10, Iwamoto discloses the receptacle device (spring 20, figures 2A-2B) has a recess for form fittingly receiving one end of the first electrode (the hollowed interior of the spring 20 is the claimed recess for form fittingly receiving one end of the measuring electrode assembly 3 which includes measuring electrode 11, see figure 1).

Addressing claim 11, Iwamoto discloses a sealing device (the lower end of the control member 5) through which the one end of the first electrode is in tight contact with the

recess (in figure 1, the spring 20 and the measuring electrode assembly 3 are locked at the lower end of the control member 5, 4:49-53).

Addressing claim 12, Iwamoto discloses the first electrode is encased (figure 2B).

Addressing claim 13, in figure 1, Iwamoto discloses contact rods (contact wires 8 and 12, 4:2-10) are provided and at least one of which is connected to the first electrode and which protrude through a base plate (contact wire 8 is connected to the measuring electrode 11 and protrudes through the lower end of the control member 5 or claims base plate) and are bent on a bottom side of the base plate (contact wires 8 and 12 are lead through cable 18, which is bent at the bottom side of the control member) so that the bent ends of these contact rods are threaded into eyes (the bent ends of the contact rods are considered eyes for the cross sections of contact wires 8, 12 and cable 18 have shapes that resemble eyes) provided specifically for this purpose on the bottom side of the base plate (due to the indefiniteness of the “this purpose” limitation as addressed in the 35 U.S.C. 112 2nd paragraph above, the disclosure of Iwamoto is considered meeting the limitation of present claim).

Addressing claim 14, in figure 1, Iwamoto discloses a chamber (measuring portion holder 3) which enclosed by the housing (housing 2) and is tight with respect to the outside; and at least one second electrode (reference electrode 13) provided between the first electrode (measuring electrode 11 with measuring electrode inner tube 6) and a casing (the wall of

the measuring portion holder 3), and the base plate (lower portion of the control member 5 where the spring 20 is seated, 4:53-58) tightly seals a lower area of the chamber (3).

Addressing claim 15, Iwamoto discloses a polymer protolyte liquid (gel formed reference electrode inner liquid 14) is added to the chamber, surrounding the first and the second electrodes (gel formed reference electrode inner liquid 14 is provided in the measuring portion holder 3 surrounding the measuring electrode inner tube 6 and reference electrode 13, 4:8-17, figure 1).

Addressing claim 16, Iwamoto discloses the first electrode is situated in a tube (measuring electrode inner tube 6) to which an electrolyte liquid is added (inner liquid 10, 4:3-7).

Addressing claim 17, Iwamoto discloses the tube (measuring electrode inner tube 6) is displaceable in the axial direction toward the first electrode (figures 1-2B, measuring electrode inner tube 6 is displaceable in the axial direction toward the measuring electrode in figures 2A-2B, 5:32-48).

Addressing claim 18, Iwamoto discloses the housing (housing 2 in figure 1) is displaceably situated on a measuring tip (pH responding portion 7 of the measuring electrode) with respect to the first electrode (measuring electrode 11, in figures 2A-2B, the housing 2 is displaceable with respect to the tip 7 of the measuring electrode).

Addressing claim 19, in figure 1, Iwamoto discloses a diameter of the housing (the diameter of portion 2a is smaller than the diameter of portion 2b) decreases in the direction of a measuring tip (pH responding portion 7) of the first electrode (measuring electrode 11).

Addressing claim 20, Iwamoto discloses the first electrode and/or a protective sleeve (measuring electrode inner tube 6 and tip 7) surrounding it is made at least partially of glass (3:65-4:2).

Addressing claim 21, Iwamoto discloses the first electrode (measuring electrode 11) is pivotably mounted (in figure 1, measuring electrode 11 is fixed at one end and free at pH responding portion 7; therefore, measuring electrode 11 is pivotably mounted).

9. Claims 1-5 and 7-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Morioka et al. (US 4,447,309) with evidence provided by Kambara (US 4,404,964) and the Oxford English Dictionary (http://dictionary.oed.com/cgi/findword?query_type=word&queryword=diaphragm, retrieved 06/11/2008).

Addressing claim 1, Morioka discloses a measuring device (figures 1A-1B), comprising:

An elongated first electrode (glass electrode 8) having a longitudinal axis (the longitudinal axis of glass electrode 8 extends from the sensing unit 15 to the contact 17 in figure 1A) for insertion into a material (test solution, 1:7-8) to be measured; and

A housing (sleeve 1), which at least partially surrounds the first electrode (see figure 1A), wherein the first electrode is movable in the axial direction of the longitudinal axis (it is clear that the first electrode 8 can be moved in any direction including the axial direction of the longitudinal axis; furthermore, electrode 8 has to be moved in the axial direction of the longitudinal axis for insertion in cavity 8a, 3:67-4:2).

Addressing claim 2, Morioka discloses a receptacle device (conductive rubber 21) is provided for accommodating one end of the first electrode (contact 17 of glass electrode 8 is inserted into female contact 21a of conductive rubber 21, figure 1A, 4:57-62).

Addressing claim 3, Morioka discloses the receptacle device (conductive rubber 21) is made of an elastic material (rubber) which yields in the axial direction with a movement of the first electrode (Kambara discloses that conductive rubber is elastic (7:43-47, figures 7-8); therefore, when glass electrode 8 is inserted into conductive rubber 21, conductive rubber 21 would yield in the axial direction with the movement of the glass electrode 8).

Addressing claim 4, Morioka discloses the receptacle device (conductive rubber 21) has a damping element (conductive rubber material) or is connected to a damping element

(conductive rubber material) which yields in the axial direction with a movement of the first electrode Kambara discloses that conductive rubber is elastic (7:43-47, figures 7-8); therefore, when glass electrode 8 is inserted into conductive rubber 21, conductive rubber 21 would yield in the axial direction with the movement of the glass electrode 8) and thereby exerts a force directed in the opposite direction on the end of the first electrode (due to the elasticity of the conductive rubber material, it is inherent that the conductive rubber material exerts a force directed in the opposite direction on the end of the glass electrode 8).

Addressing claim 5, Morioka discloses the damping element is designed as a rubber buffer (conductive rubber 21, figure 1A).

Addressing claim 7, in figures 1A-1C, Morioka discloses the housing (sleeve 1) has a base plate (rubber gasket 7) on the side of the receptacle device and the receptacle device is part of the base plate (conductive rubber 21 is connected to contact 22 which is connected to cable 23 through rubber gasket 7; therefore, conductive rubber 21 is part of the rubber gasket 7, see figure 1A).

Addressing claim 8, Morioka discloses the base plate is made of an elastic material (rubber material of the rubber gasket 7).

Addressing claim 9, Morioka discloses the base plate is designed like a diaphragm and has folded sections (according to the Oxford English Dictionary, “diaphragm is defined as “A thin lamina or plate serving as a partition, or for some specific purpose; sometimes transferred to other appliances by which such purpose is effected: e.g.”; therefore, rubber gasket 7, which serves as a partition between sleeves 1 and 2, is designed like a diaphragm. Furthermore, in figure 1B, rubber gasket 7 has folded sections for conductive rubber 34, contact 31 and inner electrode 11).

Addressing claim 10, in figure 1A, Morioka discloses the receptacle device has a recess (female contact 21a) for form-fittingly receiving one end of the first electrode (4:57-62).

Addressing claim 11, Morioka discloses a sealing device (O-ring 19, figure 1A) through which the one end of the first electrode is in tight contact with the recess (in figure 4, O-ring 62 serves as a seal (5:15-17); therefore, O-ring 19 would perform the same sealing function between the distal end of the glass electrode 8 and the conductive rubber 21).

10. Claims 1-2, 10-11 and 21-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Derr (WO 01/57507) with equivalent English translation provided by Derr (US 2003/0057952).

Addressing claim 1, Derr discloses a measuring device (figures 1-2B), comprising:

An elongated first electrode (cylindrical first electrode 2) having a longitudinal axis for insertion into a material to be measured [0027]; and

A housing (sheath 4) which at least partially surrounds the first electrode, wherein the first electrode is movable in the axial direction of the longitudinal axis (when the operator moves the measuring device, it is clear that the first electrode 2 is also moved that any particular direction including the axial direction of the longitudinal axis).

Addressing claim 2, Derr discloses a receptacle device (holding fixture 6, figures 1-2B) is provided for accommodating one end of the first electrode.

Addressing claim 10, Derr discloses that the receptacle device (holding fixture 6) has a recess (recess 8) for forming fittingly receiving one end of the first electrode (figures 1-2B).

Addressing claim 11, Derr discloses a sealing device (ring 12A) through which the one end of the first electrode is in tight contact with the recess [0033].

Addressing claim 21, Derr discloses the first electrode is pivotably mounted (figure 1, [0033-0034]).

Addressing claim 22, Derr discloses the first electrode has pivoting means, via which the first electrode is pivotable away from the axial direction in the case of a force component perpendicular to the axial direction (figures 2A-2B, 6A-7, [0035]).

11. Claims 24-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Schwartz et al. (US 4,473,458).

Addressing claim 24, Schwartz discloses a portable pH meter (measuring device 10, figures 1-2) having a modular replaceable pH measuring device (electrode component 12B is detachable from electronic component 12A, 5:14-19, 6:23-26), wherein the measuring device includes:

An elongated first electrode (working electrode 22) having a longitudinal axis (the longitudinal axis of measuring device 10) for insertion into a material to be measured (figure 4, 6:32-35); and

A housing (housing portion 12b) which at least partially surrounds the first electrode (figure 4), wherein the first electrode is movable in the axial direction of its longitudinal axis (when the operator moves the measuring device 10 in any direction, the working electrode 22 is moved in the same direction; therefore, the working electrode 22 is movable in any direction including the claimed axial direction of its longitudinal axis. Furthermore, the working electrode 22 is carried or supported on a valve member that is biased in the closed position by spring 28 and clockwise rotation of the cap 14 causes lifting of valve 24 and lower end 22A of the working electrode, 4:48-51).

Addressing claim 25, Schwartz discloses the pH meter further comprising a display (liquid crystal display 60, figure 4) and a keyboard (knobs 66 and 68 and pushbuttons 76, figure 4) situated in the housing (portion 12B of measuring device 10) and a circuit board (figure 6, 5:51-65) from which spring contacts (wire 34 and coil wire 38, figure 4, 5:3-13,

wire 34 resembles a spring shape and wire 38 is coiled in spring like fashion) lead away to contacts (connectors 37 and 40) being situated on a bottom side (bottom side of housing portion 12A) of the base plate (closure 44, figure 4).

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

14. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Iwamoto et al. (US 5,939,610) in view of Mizushiri et al. (US 5,512,104).

Addressing claim 23, Iwamoto discloses the housing 2 is made up of synthetic plastic resin (3:61-63).

Iwamoto fails to disclose the housing contains at least in part a SAN or ABS material.

Mizushiri discloses plastic synthetic resin such as acrylonitrile acryl styrene and acrylonitrile butadiene styrene (1:19-31).

At the time of the invention, one with ordinary skill in the art would have found it obvious to modify the measuring apparatus of Iwamoto by using the SAN and ABS synthetic plastic resins of Mizushiri for the housing 2 because the SAN and ABS synthetic plastic resins of Mizushiri provides protection against many external factors (Mizushiri, 1:26-31); furthermore, Iwamoto discloses that the housing 2 is made up of synthetic plastic resin (3:61-63).

Conclusion

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to BACH T. DINH whose telephone number is (571)270-5118. The examiner can normally be reached on Monday-Friday EST 7:00 A.M-3:30 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam X. Nguyen can be reached on (571)272-1342. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1795

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BD

06/19/2008

/PATRICK RYAN/

Supervisory Patent Examiner, Art Unit 1795